Information Sheet on Ramsar Wetlands
RIS

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

1. Date this sheet was completed/updated:
06/20/2001

FOR OFFICE USE ONLY.
DD MM YY
Designation date | Site Reference Number

2. Country:
the People's Republic of China

3. Name of wetland:
San Jiang National Nature Reserve

4. Geographical coordinates: E:34°4′38″ E:134°36′12″
N:48°8′20″ N:47°44′40″

5. Elevation: average and/or max. & min. **0-50m** **6. Area:** 164□400 ha

7. Overview: general summary, in two or three sentences, of the wetland's principal characteristics
The site is an alluvial geomorphic flooding plain, typical of the inland wetlands in high altitude And ecosystem due to the mixture of rivers, open bogs, seasonally flooded meadows, sedge marshes in the northeastern part of China. It has been originally preserving the unique wildlife gene pool of permanent freshwater and seasonal freshwater wetlands in the San Jiang Plains with rich biodiversity.

8. Wetland Type please circle the applicable codes for wetland types; in the present document, the "Ramsar Classification System for Wetland Type" is found on page 9

marine-coastal: **A • B • C • D • E • F • G • H • I • J • K**
Zka

inland: L·M·N·O·P·Q·R·Sp·Ss·Tp
Ts·U·Va·Vt·W·Xf·Xp·Y·Zg·Zkb

human-made: 1· 2· 3· 4· 5· 6· 7· 8 · 9·Zkc

Please now rank these wetland types by listing them from the most to the least dominant:
M. 3.N.Tp. 1 .4.Ts.W. 2. Xf. 9.U.

9. Ramsar Criteria: please circle the applicable Criteria; the *Criteria for Identifying Wetlands of International Importance* are reprinted beginning on page 11 of this document.

1· 2· 3·4· 5· 6· 7·8

Please specify the most significant criterion applicable to the site: 1.

10. Map of site included? Please tick √ *yes*
Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits.

11. Name and address of the compiler of this form:

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Please provide additional information on each of the following categories by attaching extra pages **please limit extra pages to no more than 10:**

12. Justification of the criteria selected under point 9, on previous page. Please refer to the *Criteria for Identifying Wetlands of International Importance* appended to this document

Criterion 1□San Jiang Plains is an alluvial plain flooded by the Hei Longjiang River, Song Huajiang River and Wu Suli River, which is also the largest distribution area of fresh water wetland in China with intense marshes and swamps. Supporting basic ecological features typical of inland freshwater wetland and ecosystem in high altitude area, the site indicates international importance in Asia even in the world. The site comprises two major parts, i.e. Wu Suli River valley and Ya Luhe River catchment, with total area of 164,400 ha. Due to its remote location, there is little interference by human activities.

Criterion 2,4□National First Class Protected Waterfowls of China within the site are species.i.e. *Ciconia boyciana*(E)*,Grus japonensis*(E)*, Ciconia nigra*(E)*, Mergus squamatus*(CR)*, Haliaeetus pelagicus, Aquila chrysaetos, Haliaeetus leucoryphus, Haliaeetus albicilla;* Natioal Second Class Protected Waterfowls are typical species, .i.e. *Anser albifrons, Cygnus Cygnus*(VU)*, Aix galerculata*(VU)*, Tetrao tetrix, Lagopus lagopus, Grus vipio* (VU)*, Bonasa bonasia*. There are species raptors such *Ursus arctos, Selenarctos thibetanus, Lynx lynxg, Lutra lutra, Lepus timidus, Cervus elaphus, Alces alces* and fish llike *Acipenser schencki, Huso dauricus* to inhabit or breed here. Upon the survey, there 6-8 *Ciconia boycana,* 8-9 *Grus japonensis,* 18-20 *Grus vipio,* 8-10 *Haliaeetus albicilla*, and 5-7 *Aquila chrysaetos* to stage here for breeding annually.

Criterion 3□Vegetations at the site have developed well with unique and rare characters featured by *Calamagrostis angustifolia* meadow, reed meadow and broad-leaved Island-shaped forest consisting of *Betula fruticosa*, *Quercus mon-golica, Populus davidiana*, *Juglans mandshurica*□ and meadow vegetation is made of meadow plants, *Betula platyphylla, Deyeuxia angustifolia*, *Phrag-mitcs communis*, *Artemisia selengensis*. In the site marsh and swamp vegetation mainly include *Carex meyeriana*, *Belboschoenus maritimus*, *Caltha palustis* and *Alnus sibirica*

Criterion 5□According to the underway survey, water bird like wild ducks(*Anas acuta,crecca, Anas Formosa, Anas falcate, Anas platyrhynchos, Anas poecilorhyncha, Anas streoera, Anas querquedula, Anas clypeata, Artya baeri, Artya fullgula, Aix galericulata, Melanitta fussca Bucephala clangula, Mergus merganser, Mergus albellus Mergus squamatus*) are over 20,000 in spring and autumn and wild cormorant(*Phalacrocorax carbo*) could exceed 30 000. Particularly in autumn the populations of goose and duck(*Anatidae*) can reach 100,000.

Criterion 7,8□fishery resources in the site are types peculiar to the Hei Longjiang River and Wu Suli River. Scientific survey indicates there are 77 species fish in the Nature Reserve, of which 76 species live in the middle reach of the Hei Longjing River and its branches and the Wu Suli River and its branches support about56 specie. Most of them are cold water-like fish. The middle reach of the Hei Longjiong River are important habitats for such economic fish as *Paradramis pekinensis*, *Megalobrama skolkoui*, *Coregonus ussuriensis, Cyprinus carpio, Ctenopharyngodon idellu-s*, *Sinipeca chuatsi* and *Silurus soldatovi* staging, breeding or wintering. The Hei Longjiang River is also the important migration path on which the *Oncohynchus keta* peculiar to the river depend for spawning, meanwhile, it is the advantageous source of food, spawning and nursery ground for some fish. The Wu Suli River with so many branches provide many valuable fish with places for migration spawning and nursery. .(Hei Longjiang Sanjiang NNR Master Plan 2001-2010, Academy of Forestry Inventory and Planning & Sanjiang NNR Bureau, 2001)

(According to *China National Wetlands Conservation Action Plan* and *Science Report of the NR*)

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13. General location: include the nearest large town and its administrative region

The site locates in northeast of Hei Longjiang Province, territorially shared by Fu Yuan and Tong Jiang county. It is 400 km away from Jia Musi City and closely neighbor to Russia

14. Physical features: e.g., geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate1.

Geology And Geomorphology: the geology structure could be classified as the central section of the secondary unit of Tongjiang inland broken string in the Mesozoic era—the mid-section of Fuyuan Hollow, with large area of water in low basin forming marshes and swamps filled by wetland sediment. The geological unit includes alluvial plains interspersed with low hillocks, floodplains and flooding area, which characterize much more proportion of the floodplain and flooding area with fertilized soil and abundant vegetations.

Origins□Natural alluvial plains

Hydrology: the site is covered by two big water systems, .i.e. the Hei Long Jiang River and Wu Suli River. 30 km of the Hei Longjiang passes the site and 115km of the Wu Suli River directly supports the Nature Reserve, with 57 branches and some 210 lakes or ponds covering the site. Their fist class branches include Ya Lu River, Nong Jiang River, and Bie La Hong River with marshes and swamps in upstream. Small rivers or rivulets passing the area feature typical water path in floodplain forming so much curves and shallow bed in drought season, so it makes water flood the plain regularly. In flooding season, water in these branches will pour into the plain caused by high water level in the Hei Longjiong River and the Wu Suli River and the natural difficulties of drainage, within which flooding water could go back as far as 20- 70km. Therefore, annual high water level enable the development of marshes in such cold area. Consequently the site is abundant of groundwater, which is formed as a holistic and sequent water body by different layer with high penetration.

Soil type□soil type includes such 4 types as baijiang soil, meadow soil, marshy and swampy soil, peat soil□which could be subdivided as 9 soil sub-species, 9soil categories and 9 soil species.

Water quality□the natural water contains36—202mg/l mineralization with rigidity of 0.67—4.67 and Ph 5.3—6.8. The groundwater indicates high quality with low quantity of iron and iodin ion.

Water level: in the Hei Long Jiang River it was 89.6 m in the most depth, on the contrary, the lowest level was 79.49m and the mean level was 86.60m. In the Wu Suli River the highest water reaches 101.40m, the lowest being 94.60m and mean level of 95.41m. However, the water levels in many branches and lakes or ponds vary tremendously due to the water blockade in the mainstream in flooding season.

Down stream areas: the Nature Reserve acts as a huge natural reservoir in the San Jiang Plains, which contains 3-9 times even more of water than soil itself and the quantity of water it hold is about 400-600% with such low quotiety of outflow as 0.5 or so. Thereby most of the flooding water could be caught and stored in soil or run into lakes and ponds in the way of runoff, so that the flood threat towards down stream could be relieved.

Climate: the site is situated in the most northeast of China and the high altitude features long but cold winter and short but hot summer. Being close to the Okhotsk Sea□the site is under the influence of the oceanic climate. Particularly in winter it is under control of the continental air mass in polar region and impacted by sub-torrid zone oceanic air mass in summer as well. Thus compared to inland at same altitude the annual difference of temperature is mean. With the character of oceanic climate, the shifts of seasons are clear and the frost period is long and precipitation concentrate on autumn and winter with 603.8mm annually. Annual mean temperature remains 2.2□□the period free of frost is 115—130 days□and the freeze-up period remains about 210 days. Firn period is 120days.The mean evaporation of 1257.1mm is over twice of mean precipitation.

15. Hydrological values: groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

□The site with vast area of numerous swamps, marshes, lakes, ponds and mixture of rivers, usually become a natural reservoir to store substantive water especially when it is flooding season.

□The site plays important role to regulate climate and air humidity locally even globally.

□Due to serious soil erosion in the upstream□a large mount of sediment deposits here with nutrimental pollutant.
□Flooding water stored in the site increases the air humidity while supplies the groundwater.

16. Ecological features: main habitats and vegetation types

The site supports a typical fresh water marsh ecosystem, comprising island-shaped forest□vast area of numerous swamps , marshes, lakes ponds and mixture of rivers, which is supporting lush vegetations like *Carex lasiocarpa*, *Carex meyeriana,,Carex pseudocuraica,Carex psehdo* and *Calamagrostis angustifolia*, *Salix brachypoda*, *Betula*, *Typha orientalis* and *Acorus calamus* Numerous of algae provide fish with sufficient food, at the same time, plankton and fish offer water bird favorable bait. The vast area of wetlands and lush vegetation furnish water bird with advantageous habitats for staging and breeding. Herbage pants is mainly distributed on low meadow and grassland, but broad-leaved forest is dispersed in low hill area.

17. Noteworthy flora: indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.

At the site there are some 500 species higher plants, subdivided into 95 families. Of these the main wetland plants are many kind of *Carex*. Thanks to remote location and little interference of man, the botanic evolution and succession occur naturally. The flora belongs to Chang Bai Mountain System. A large area of dormant marsh vegetation has developed or is developing because the marsh is in seeper to some extent. *Gramineae* and *Cyperaceae* dominate the site. Generally speaking, many crucially protect plants like *Fraxinus mandshurica, Glycine soja, Juglans mandshurica and Phellodendron amurense* living here

Marsh□In term of marsh it can be divided into light marsh and weight marsh according to the depth of seeper. It is usual to find *Calamagrostis angustifolia* and *Carex lasiocarpa* in light marsh and the weight marsh includes *Carex lasiocarpa,Carex Pseudocuraica,Clyceria acutifora*, reed *Calamagrostis angustifolia* and *Carex lasiocarpa*.

Meadow□In the principle of botanic taxonomy, meadow here can be classified as true meadow and marsh meadow. At the site meadow is mainly covered by the types of *Calamagrostis angustifoli + Betula microphylla*□comprising more than 70-80 communities.

Broad-leaved forest: broad-leaved forest is mainly distributed on remnant hillock with the domination of Mongolian Oak (*Quercus mongolica)* and a little existence of David Poplar*(Populus Davidiana*) and Asian White Birch(*Betula platyphylla*). Shrubs include Lespedeza bicolor and herbage plants consists of *Paeonia lactiflora, Convallaia keiske,,Pteridium aquilinum.* There are also such national first class protected plants as *Glycine soya, Fraxinus mandshurica ,Phellodendron amur-ense, and ManchurianWalnut* .

Aquatic plants: Three types, including submerged plants like *Utricularia intermedia, Ceratophyllum –demersum, Hydrilla verticillata,* floating plants, like *Nymphaea tetragona, Lemna minor;* hydrotherophyte erecting plants**,** like reed, *Acorus calamus* and *Typha orientalis.*

Cheng Gang Qi e.l. Research on Marsh and Swamp in the San Jiang Plains, Science Publisher,1996.
Ma Qingyi Research on rational exploitation and waterfowl conservation in the San Jiang Plains, Nature Resource Research,1984.3, 35□41,

18. Noteworthy fauna: indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.

Geologically and zoologically the site stands in the Palaearctic realm, Northeast region, Changbaishan Mountion sub-region on the division of zoogeographical areas□which is just in the triangle area of the confluence by the Hei Longjiang River, Song Huajiang River and the Wu Suli River. The Xi Huo Te mountain sits opposite of the Wu Suli River, thus the component of the wildlife is unique with changeable distribution. Based on statistic, beast being 5orders, 12 families and 37 species, avifauna being 18 orders 40 families 210 species□reptiles being 3 orders 4 families 7 species, amphibian being 2 orders 4 families 5 species, hexapod being over 500species.According to the survey, there 6-8 *Ciconia boycana*, 8-9 *Grus japonensis*, 18-20 *Grus vipio*, 8-10 *Haliaeetus albicilla,* and 5-7 *Aquila chrysaetos* to stage here usually for breeding/wintering annually.

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19. Social and cultural values: e.g., fisheries production, forestry, religious importance, archaeological site, etc.

□ Ongoing eco-tourism along the two rivers is promoting the local further opening up and economic development.

□ The Nature Reserve will make the conservation of wildlife further developed, being established as an public education and awareness center.

□ The site possesses abundant resources of bird, animal and fish plus rich forests, which could bring local inhabitants benefits to improve their living standards by developing agricultural innovation in experimental area. For instance, fishery is major income source of local people.

□ About 300—400 He Zhe nationality, one of the least ethnic group in China, live within the site, therefore, the site support a kind of unique culture with potential value.

20. Land tenure/ownership of: a site b surrounding area

□ The Nature Reserve□State's ownership

□ Surrounding area□State and local communities share the land tenure

21. Current land use: a site b surroundings/catchment

□ The Nature Reserve : using for nature conservation, scientific research and tourism

□ Surrounding area□using for nature conservation, scientific research ,tourism, fishery, raising stock, agriculture and township.

22. Factors past, present or potential adversely affecting the site's ecological character, including changes in land use and development projects: a at the site b around the site

At the Nature Reserve:

(1)Human interference of the wildlife habitats

(2)Due to the irrational fishing by local people with net of increasingly smaller mesh, the food for waterfowl decrease dramatically.

Surrounding area

(3)Local harvest forest for energy □

(4)Illegal hunting, encroaching and poisoning wildlife

(5) Fire deliberately planned to impact wildlife breeding and immigration

(6)Human interference of the wildlife habitats

(7)Irrational reclamation and the establishment of drainage channel□

23. Conservation measures taken: national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented

□In 1994 building provincial nature reserve and becoming a national one in 2000 with area of 164,400ha□also setting up three site management stations

□Obtaining the certificate of land ownership from local government, so the Nature Reserve has the right to manage the resources independently.

□Setting up law implementing office□to ban the illegal hunting, logging and reclamation

□Collaborating with local township governments to protect waterfowl jointly.

24. Conservation measures proposed but not yet implemented: e.g., management plan in preparation; officially proposed as a protected area, etc.

□Promoting international cooperation and communication with members along the immigration path in northeast Asian Region. Developing the Sino-Russia cooperation in the valley on conservation, research and management.

□Having Stimulated and issued Provincial Regulations on the Management of San Jiang Nature Reserve □

□Launching the returning arable land to wetlands programs □

□Taking the agricultural activities into the master planning of the Nature Reserve to lead local farmers to develop eco-agriculture.

□planning to emigrate some residents within buffer zone outsides and return to wetlands

25. Current scientific research and facilities: e.g., details of current projects; existence of field station, etc.

□Having concluded the GEF sponsored research .i.e. The Research on Collaborative Management Technology between the Nature Reserve and Local Communities
□Having done research on the immigration quantity of wild goose and duck.
□Raptor research on distribution, quantity and conservation.
□Research on wetland protection and countermeasures in the Nature Reserve.
□Research on artificially attracting *Ciconia boycana* and its quantity.
□Research on wetland ecology monitoring.

26. Current conservation education: e.g., visitors centre, hides, info booklet, facilities for school visits, etc.

□Having built a scientific practice teaching base at the site jointly with the Wildlife Resources Management College at Northeast Forestry University
□Specimen Exhibition Room being open to public for scientific research and education
□Having been launching public education and interpreting activities on efficient wetland utilization, knowledge of wildlife Law or regulations particularly in the Bird Week, on the World Wetland Day and the World Earth Day.

27. Current recreation and tourism: state if wetland is used for recreation/tourism; indicate type and frequency/intensity

Take the advantage of border to Russia and rich natural resources, some tourism activities have been developed.

28. Jurisdiction: territorial, e.g. state/region, and functional, e.g. Dept of Agriculture/Dept. of Environment, etc. Territorially in Jia Musi City, functionally being under the Forestry Department of Hei Long Jiang Province

29. Management authority: name and address of local body directly responsible for managing the wetland

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30. Bibliographical references: scientific/technical only

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